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SHORTIA

NEWSLETTER OF THE
WESTERN CAROLINA BOTANICAL CLUB

SPRING 1993

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NEW YORK
BOTANICAL GARDEN



BUD PEARSON, Editor

First, let me take this opportunity to thank Bess and Ken Sinish, Grace Rice and all the committee chairman and trip leaders for their devotion and hard work on behalf of the club this past year. The incoming officers have a hard act to follow.

From the beginning, this club has been a group of men and women sharing a common interest in wildflowers and the habitats in which they grow. It's a congenial group to which each individual brings skills and special interests with experts on one topic always willing to share their knowledge and learn in turn from others. That's what makes this club extra special. But like any organization, it depends on constant participation and feedback from its members. So if you have ideas about activities, please do let me and the other officers know.

With this issue of SHORTIA, Ruth Hoerich is taking over the responsibility for printing and distribution of club publications. Frances Gadd has worked faithfully for many years in assuring that we receive SHORTIA, the roster and schedule on time, - - a much more complicated task than most of us realize. Many thanks, Frances!

VOLUNTEER NEEDED TO EDIT SHORTIA

After serving as editor of SHORTIA since the Spring of 1991, Bud Pearson has asked me to "seek a new editor....someone who is present and attends meetings and field trips with some regularity." For me, as President, that is bad news! Bud has been doing a great job, publishing four issues a year.

SHORTIA is an important part of our club - - a ready route for news about the club activities and a source of informative articles of special interest to members.

Would you be interested in taking over as editor? If so, please call me at (704) 697 1767 or speak to me at a meeting. I hope I get several volunteers!

GARDENS OF THE TRIAD - - PREPAYMENT FOR ROOMS

See Schedule for description of this trip for April 13 - 15. There is already a good list of reservations. Deadline for sign up is April 1.

Dean Crawford has secured a special low room rate at the Holiday Inn West (Durham) by having WCBC manage the room charges as a block for the entire group. This means the club Treasurer must collect money ahead of time from each participant to cover the room charge. For two nights double occupancy that is a total (including tax) of \$43.29 per person.

Your check should be made payable to WCBC and sent to:

Elaine Montgomery, Treasurer
1636 O'Hara Circle
Hendersonville, NC 28739

Please do so as soon as convenient but no later than April 1, because the Club has had to pay a sizeable deposit. Cancellations will be honored in full up to that date.

You will be expected to pay food and other charges on an individual basis. Dean has arranged for adjacent first floor non-smoking rooms. Any other special requests should be made through him. Maps and schedule will be provided and car pooling arranged by Dean as soon as all payments are made to Elaine.

...from the President, Dorothy Rathmann

HIGHLIGHTS OF THE ANNUAL BUSINESS MEETING

The club elected Millie Blaha and Elton Hansens to Honorary Life Membership. Millie and Elton have each distinguished themselves by their efforts on behalf of WCBC and by furthering interest and education in the field of botany.

Treasurer Ken Sinish reported the year end account balance was \$850.79. Receipts were \$1,194.79, while disbursements amounted to \$1,225.78. It was agreed that a \$75.00 contribution be made to each of the following:

Nature Conservancy
North Carolina Arboretum
University Botanical Gardens at Asheville
Friends of the Library, Hendersonville

The gift to the library was for the purpose of purchasing the following books to be made available to the public:

FERNS, A NATURAL HISTORY, Edward Frankle
GRASSES, AN IDENTIFICATION GUIDE, Lauren Brown
RED OAKS AND BLACK BIRCHES, Rebecca Rupp
GUIDE TO VASCULAR PLANTS OF THE BLUE RIDGE, B. Eugene Wofford
WILY VIOLETS AND THE UNDERGROUND ORCHIDS, Peter Bernhardt

NONPAYMENT OF DUES

Ken Sinish, former treasurer, announced that an asterisk beside your name on the address for this issue of SHORTIA indicates that there is no record that your dues have been paid. If you believe there is a discrepancy you may call Elaine Montgomery, Treasurer, at 693 7704, or you may mail your check, in the amount of \$8.00 made payable to WCBC, to Elaine at; 1636 O'Hara Circle, Hendersonville, NC 28739.

20TH ANNIVERSARY CELEBRATION

This years annual meeting celebrated the twentieth anniversary of the Western Carolina Bontanical Club. Harry Logan was credited with suggesting the formation of the club and getting it underway by organizing the first field trip. Harry Logan, Pat Tooley, Bruce Leech, and Gladys Mulvey of the original ten founders were present for the celebration. Jeanne and Dick Smith and Elton Hansens published a booklet commemorating the anniversary, which has been distributed to the members.

* * * * *

WILDFLOWER COURSE

Elizabeth Feil has announced that Chimney Rock Park will sponsor a 7 session Wildflower Course beginning April 14, 1993. The course is limited to 15 participants.. "who must be able to walk the Skyline Cliff Trail loop." The cost is a \$10 registration fee plus the cost of a season pass to the Park. For more information, contact Elizabeth Feil.

* * * *

Note: Fringed Phacelia should be at peak bloom on the Blue Ridge Parkway at mile posts 370-375 in April and May. So says the Parkway's Bloom Calendar.

This past year the field trip season was marked by unseasonably warm weather in late winter and early spring and then cold weather in late spring. Some plants bloomed early, others late. As a result on many of the field trips fewer plants in blossom were seen.

Out of the 37 field trips scheduled, 7 were cancelled, including the overnight trip to the Smokies. Both the spring and mid-summer trips to Sugarioaf produced high counts of blossoming species, with the August trip producing the highest count of 69. Other trips on which more than 40 species in bloom were identified were the Mud Creek trip, the Haywood Gap Mountain to the Sea Trail, Butter Gap, and Parkway South.

A number of plants listed as being of increasing degrees of rarity by the Carolina Natural Heritage Program were found on some of our field trips. At Roan Mountain we saw *Alnus crispa*, green alder, and *Lilium gravi*. At Parkway South we found *Hypericum bucklevi*, Blue Ridge St Johnswort. At Pilot Mountain there was *Rhododendron vaseyi*, and at Mud Creek, *Ampelopsis cordata*, Heart leaf peppervine. *Trillium discolor*, Mottled trillium, and *Shortia galacifolia*, Oconee Bell, both were seen in South Carolina; the first is on the threatened status in North Carolina and the second is on the endangered list.

The four workshop programs on the rose family, ferns, mushrooms and goldenrods were well attended and received good reports. Perhaps we should continue to branch out from our concentration of wildflowers in bloom.

This year trip leaders were encouraged to emphasize the general features of the areas visited in order to help us understand the various habitats in our region. For example, the different types of hardwood forests as exemplified by the low elevation cove hardwood forest of tulip poplar, basswood, and buckeye seen at Bat Cave, and a more typical mixed hardwood and coniferous type dominated by oaks, beech and hemlock at Horse Cove. We also saw two types of wetland; Mud Creek with its standing water supporting such hydrophytes as pickerel weed and spatterdock, as different from the seepage bogs covered with sphagnum moss in the Pink Beds area. We also visited high elevation meadows and balds and spruce-fir habitats at Roan Mountain and Haywood Gap.

The Recorder furnished plant lists to leaders for distribution to the field trip participants. Please let the Recorder or a member of the committee know if you would like this distribution to continue in 1993. The committee has worked hard to put the new recording system into effect with many more trips now having, in addition to plant lists, trip directions and habitat descriptions available. A few more refinements are needed to make the system work even better.

In closing I would like to thank the members of the Recorder's Committee for all their hard work. Committee members are, Elton Hansens, Jane Blackstone, Louise Forseman, Grace Rice, Anne Ulinski and Bill Verduin.Erika S. Parmi

Note: Birdfoot Violets may be found at mile markers 147.4, 202, 260.5 and 379 of the Blue Ridge Parkway in the months of March thru May. There are supposed to be Serviceberry trees in bloom at mile markers 344.1 - 355.5. Will somebody check?

LOOK AGAIN !

The bright, wide-open innocent look of Blue-eyed Grass flowers makes them appealing enough to satisfy most of us, but those who have the interest--and patience--to pursue such things will soon learn that no less than four kinds of Sisyrinchium occur in our area.

The differences between species exist not so much in the flowers themselves as in the vegetative structure, and it is first necessary to become familiar with the several components and the terms that are used in describing them. Using as an example our most common species, S. angustifolium, we see that there are:

(1) the leaves, which are basal and are long, flat and about $3/16$ " wide; (2) the winged scapes, or primary flower stalks, which also arise from the base and are flat and about the same width as the leaves; (3) the peduncles--in this case two--which actually are branches extending from the summit of the scape; and (4) two-bracted spathes, one terminating each peduncle. It is within these sheathing spathes that the flowers are borne on hairlike stalks in umbels.

S. atlanticum also has two peduncled spathes, but its leaves and scapes are only $1/8$ " wide.

Of the other two species, S. albidum has two spathes, but they are sessile and twinned at the top of the $1/8$ " wide scape. Its flowers may be either white or blue.

S. mucronatum, on the other hand, has solitary sessile spathes, and its leaves and scapes are extremely narrow, only $1/16$ " in width.



S. ANGUSTIFOLIUM

Dick Smith

Color in biology and perhaps most strikingly in botany is one of the principal sources of our enjoyment of the world around us. Barbara Hallowell in her beautifully illustrated talk, "Green is Beautiful", pointed up with clarity how much we depend on the color green for our appreciation of botany. There are, as we all know, many other colors in nature, and much research and many writers have given us information about how these colors are produced. Dr. Meuse in his book, "The Story of Pollination", presents an interesting summary of some of the factors involved in the production of the many colors in his chapter, "A Way to Paint".

Some of the more common factors that play roles in our perception of color are:
A. Which colors are absorbed and which reflected; we see only the reflected colors.
B. The pigments present: 1. Those present in solution in the cell sap, such as the anthocyanin. Though anthocyanin in Greek means blue flower, there is a family of these pigments that ranges from blue to red. Some even change color with change in pH. 2. Some pigments, such as chlorophyll and the carotinoid, are present in particles within the cells. The chlorophyll mixed with many other substances is present in chloroplasts. The carotinoids in the form of crystals within the cells, droplets of yellow oils and "flavone" relatives of the anthocyanins are a source of additional yellow color.
C. Pigments of different colors in adjacent cells give various colors and the effect of "pointillism".
D. Layers of cells, each layer with a different color, gives still greater variations, including black.
E. The effect of air within the tissues and other tiny colorless bodies will produce white.

Let us examine some examples of these factors to illustrate how they work.

Green is so ubiquitous in plants that it seems appropriate to look first at it. We know that it is the green chlorophyll that synthesizes the substance necessary for the metabolism of the plant. But it is particularly interesting to realize that it is the red and blue colors of the white light that falls on the plant that are the source of energy for this synthesis. The green that we see is the light that is not used, what is "left over" and is reflected. The useful light, the red and blue, we do not see because it is used to supply the energy for the synthesis.

The anthocyanins provide us with a wide range of colors depending on the special chemical of the family and are probably the greatest source of botanical colors. But there are interesting modifications as well. The effect of pH of the soil is well known in the change of flowers of hydrangea from pink to blue as the acidity increases. The effect is indirect, however, for it is the increased availability of aluminum in acid soil that changes the color. A subtle variation in color is the result of different colors in different cells of a layer. One does not see the individual colors but a blend of them, the same as the "pointillism" used by Seurat in his painting.

A quite different effect is obtained if one layer of cells has one color in its cells and a layer below has another. The most extreme example may be the production of black. In the base of the poppy there is a red layer which absorbs blue and an underlying blue layer that absorbs red, and all the parts of the white light are absorbed. There is no light reflected, therefore no color, thus black. Another quite different effect is seen in the buttercup. We are all familiar with the bright, glossy color of the petals. The surface cells contain a yellow oil but below is a layer of cells so packed with starch granules that it reflects all of the white light and is intensely white. This reflection of white
(continued next page)

light back through the yellow gives the surface a brilliant glossiness with which we are all familiar.

The color, white, which is so common, usually results from tiny, colorless particles which reflect all of the white light that impinges upon them. These particles may be starch granules as mentioned above in the buttercup, or, very commonly they are tiny bubbles of air. The effect of this air can be demonstrated by placing a white petal in water and applying a vacuum to remove the air and then releasing the vacuum and letting the water fill the spaces formerly filled with air. The petal will become nearly transparent and colorless. This effect can be more easily shown by placing a single piece of toilet paper on a pan of water. Watch it lose its color and become nearly transparent as the water replaces the air.

One final example: If the colored surface is covered by tiny white hairs the tone of the color will be considerably lightened. Less obvious and perhaps more interesting is the fact that tiny irregularities of the surface will produce the deep soft colors so well known in velvet. The violet, rose and pawpaw, to name only a few, illustrate this effect.

Colors and their modifications are almost endless. Those above are just a small sampling to stimulate our interest. Lowell Orbison

* * * * *

BUTTERFLIES go wherever they like and are liked wherever they go. They don't bite, sting or carry disease. They are beautiful and provide a vital link in the propagation of life. Their presence is indicative of a healthy ecosystem. Unfortunately, "progress" and population growth may limit their natural habitat. Individuals might consider gardens with nectar sources in their yards, or even preserving and maintaining host plants, if we know what they are. Some of the species listed may be found in the Western Carolinas. Most of the listed host plants are found in this area.

BUTTERFLY SPECIES

LARVAL HOST PLANT

SWALLOWTAIL FAMILY (*Papilionidae*)

| | |
|-------------------------------------|---|
| Pipevine Swallowtail Butterfly..... | pipevine and Virginia snakeroot |
| Black Swallowtail..... | parsley - both wild and cultivated such as carrot, dill, parsley and parsnip |
| Spicebush Swallowtail..... | spicebush and sassafras |
| Zebra Swallowtail..... | pawpaw |

SNOUT BUTTERFLY FAMILY (*Libytheidae*)

| | |
|-------------------|-----------|
| Common Snout..... | hackberry |
|-------------------|-----------|

BRUSH-FOOTED FAMILY (*Nymphalidae*)

| | |
|-------------------------------------|--|
| Great Spangled Fritillary..... | violets |
| Buckeye | plantains, gerardias, toadflax, snapdragons, false loosestrife |
| Painted Lady..... | thistles |
| Red Admiral..... | nettles, false nettles |
| Viceroy and Red-Spotted Purple..... | willows-esp. black willow, pussy willow, poplars, plums, and cherries |

| | |
|--------------------------|--------------------------------|
| Hackberry Butterfly..... | hackberry and sugarberry trees |
|--------------------------|--------------------------------|

WHITE AND SULPHUR FAMILY (*Pieridae*)

| | |
|----------------------------------|---|
| Cloudless Sulphur Butterfly..... | sennas and partridge pea |
| Dogface Butterfly..... | false indigo, lead plant, and prairie clover |

MILKWEED BUTTERFLY FAMILY (*Danaidae*)

| | |
|------------------------------------|-----------------------|
| Monarch or Milkweed Butterfly..... | milkweeds and dogbane |
|------------------------------------|-----------------------|

S H O R T I A

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Editor: Bud Pearson

Distribution: Ruth Hoerich

Please submit contributions for the next issue by May 10, 1993 to:--

Bud Pearson, 2514 Kanuga Road, Hendersonville, NC 28739

SHORTIA
c/o Ruth Hoerich
215 Newport Road
Hendersonville, NC 28739



FIRST CLASS

Elton & Aline Hansens
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Hendersonville, NC 28739

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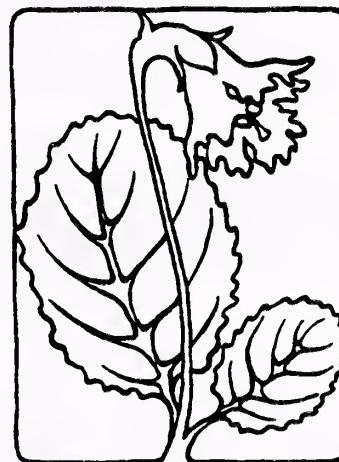
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ELTON and ALINE HANSENS
Editors

WESTERN CAROLINA BOTANICAL CLUB

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|-----------------|------------------|------------|-------------------|
| President: | Dorothy Rathmann | Treasurer: | Elaine Montgomery |
| Vice President: | Don Herrman | Recorder: | Erika Parmi |
| Secretary: | Jane Blackstone | Historian: | Louise Foresman |

FROM THE PRESIDENT DOROTHY RATHMANN

You have in your hands the first issue of SHORTIA produced by our new editorial team of Elton and Aline Hansens. They are continuing a record of service to the Club going back more than a decade. Their enthusiasm while putting this issue together has been infectious and heartwarming. I'm sure they are looking forward to having your comments, suggestions for articles and, hopefully, an offer to write occasionally for SHORTIA. Thanks, Elton and Aline!

Elsewhere in this issue is the list of committee members for this year. Involvement of so many members is one of the reasons this Club is so special. My thanks to all of you!

We got off to a slow start with five of the first six field trips cancelled because of bad weather or damaged trails. Since then we've had a beautiful spring with some spectacular displays of wildflowers. As you know, recorders keep a list of wildflowers in bloom on each outing. These records are invaluable in helping plan schedules, are used by leaders scouting the trail prior to a field trip, and simplify the recorder's task during the trip. During the past few years, a copy of the plant list has been given to everyone on an outing. I'm not planning a formal survey but I would like to know how you use these lists. Do they help you learn the names of the plants? Do you file the list for reference prior to your next trip to the area? Should we continue to distribute them? Let me know as we are walking the trails together.

The Program Committee has been working on the Schedule for July 1993 through January 1994. As usual it looks as though we'll have interesting outings with an "overnight" or two, and a light schedule in November and December. Look for the Schedule in your mailbox about mid-June.

A LETTER FROM RUBY PHARR

On March 14, 1993 Ruby Pharr wrote to Dick Smith: "Thank you so much for remembering me and sending me the 20th Anniversary report of the Botanical Club. It brought back warm memories of the many happy contacts I had with the club and its members over the years. I think it is a wonderful organization and wish I was close enough to be an active member. Please give my regards to the club. Best wishes!" (111 York St., Morgantown, NC)

GETTING TO KNOW YOU ALINE HANSENS

***Bunn, Dorothy:** Box 263, Balsam, NC 28707 (704 456 7772); winter 1175 Hermosa Ave., Bartow, FL 33830. A part time resident, Dot enjoys the outdoors and flowers very much and looks forward to WCBC trips whenever possible.

Carter, Robert & Marian: Marian is originally from England and Robert from NJ. They now live in their cabin off 64E while their home is being built on Shumont Mt. Both are nature lovers. For 10 yrs. Marian was in a botanical club in Canandaigua, NY.



***Conway, Rachel M.:** 211 Aldersgate Circle, Asheville, NC 28803 (704 274 1414). Rachel and her late husband moved from the NY area to H'ville, eventually settling at Givens Estates. She is a busy, active person with an avid interest in nature -- an interest cultivated from childhood.

Harris, Mary Helen: From April to November, Mary Helen is often in the mountains she learned to love many years ago when she brought her family camping. She has an avid interest in flowers and other plants and learned of WCBC from friends.

***Hart, Tom & Beth:** 27 Waxwing Way, H'ville, NC 28792 (693 0457). Moved here from Ohio 2½ yrs. ago and are now comfortably settled in Carolina Village. Beth has a great interest in flowers and trees and Tom enjoys hiking. WCBC member Joy Johnson is Beth's sister.

***Heavner, Julia:** 935 Greenwood Dr., H'ville, NC 28739 (697 7136). Comes from near Pittsburgh. Raised in a nature oriented family, she has a real love for flowers and the outdoors.

Mahan, Hal & Laura: Originally from Ohio, they came to Asheville a year ago. Last June they opened their shop, The Complete Naturalist. Laura has an MS in botany from UNC Charlotte, where she did plant surveys with Elisabeth Feil. Hal has a PhD in ornithology. They have worked in several museums across the country and have led trips abroad.

Shade, Sarah: Originally from TN. Now in Fletcher she cares for a large garden including fruit trees and wild flowers. Her love of wild flowers drew her to WCBC.

Strayer, Lucie & Charles R. Colmant: Lucie was born in Holland and educated in Switzerland and England. Intensely interested in ecology and nature preserves, she has spent many years in service with environmental organizations.

* These new members joined after the 1993 membership list went to press. Be sure to add them to your copy.

LITTLE GEMS - FUN TO KNOW.....MILLIE PEARSON

We sometimes overlook a wealth of interesting plants with our attitude that "it's just a weed". The common dandelion, (Taraxacum officinale) is one weed we may want to look at a bit closer.

The dandelion is a perennial herb with a short stem that is hidden beneath a basal rosette of deeply toothed leaves. It has slender stalks that are hollow and contain a milky sap. Each stalk bears a head of very small, bright yellow, tightly packed ray-like flowers. Flower heads open wide in the morning and close in the evening. When the tiny flowers fade each fertile flower forms a seed. The downy white balls we know so well are a mass of fruits (seeds), each with its own little parachute that is carried away on the wind. A large amount of money is spent to eradicate this plant from lawns and gardens.

We humans also spend much on diet supplements which the dandelion could easily furnish for it is an excellent source of potassium and calcium and is the best known source of vitamin A out of all the green vegetables. Many country people eat dandelions every spring with an avidity akin to a religious rite.

In spite of all efforts to rid our lawns of this "weed", this cheery plant has held its own, producing many seeds and distributing them far and wide. Dandelions were brought to the New World from Europe. Native Americans made good use of them, making a tea from roots and leaves for use as a tonic and for heartburn. The bright sunshine yellow of dandelions makes them a thing of real beauty along roadsides (and in my grassy plot).

MY FRIEND, DAN..... BILL VERDUIN

My good friend Dan D. Lion is one smart fella. He's a real survivor, too; he's got offspring all over the place. Takes brains, he says, takes real brains to succeed. You say no plant has brains? Well, you just take a close look at Dan and tell me how he does it if it isn't brains.

Go out along the roadside or in a field (not in your lawn--you won't find any in your lawn) and really take a close look. See those beautiful yellow blooms standing up straight where all the bees and flies and such critters can see and home in on the bloom. Just what he needs (if you don't know why, ask your mother to tell you about the bees and the flowers). But now when the bees have done their thing, it's going to take several days for the seed to develop and he sure doesn't want to be stuck 6 inches up in the air where every deer, sheep, or buffalo can chomp his head off. So, using his good brains, he devises a clever solution. He carefully bends the stem right at the base so that it lies down parallel to the earth -- looks like he sorta laid down to rest a while out of reach while those seeds develop.

But he wasn't snoozing -- actually, he was worrying about how all those seeds with their built in flying machines were going to get launched in a strong wind when they got ripe. His good brains figured that out, too. Just as the seeds ripened he straightened out that lazy stem and gave it a good shot of hormones. All of a sudden that launching pad was on a stem 3 or even 5 inches above where the flower had been, ready for any accomodating breeze to cause the Great Dispersal. Pretty smart fella, Dan. Don't you agree?

The field trip season got off to a slow start. The Hardy Souls hike in February, the FENCE and Pearson's Falls trips in March and the Cosby and Oconee Station trips in April were cancelled. Cosby was rescheduled for April 26 and was held successfully in spite of rain threatening clouds the entire day. The weather definitely has not been cooperative. The very cool spring with lots of rain, the BLIZZARD of March 13-14, and cloudy weather delayed the flowering of plants and trees for about two weeks. On April 30 at Horse Cove we still saw bloodroot in flower but showy orchis and most of the other flowers were still in bud. Here's to a more normal summer and fall season!

My friend, Gisela Hennig, and I stayed over at Cosby on April 26 to explore other trails from the campground. We found a spectacular wild flower slope at Sutton Ridge 1.5 mi. in on the Lower Mt. Cammerer Trail. Here we saw all the species that were seen on the Cosby Nature Trail plus many more. The only exception was the rare Fraser's sedge. This slope was covered with blossoming large-flowered bellwort, yellow mandarin, wild geranium, early meadow rue, blue cohosh, Canada violet, golden Alexanders, mitrewort, and several species of trillium. Black cohosh, May apple and waterleaf were also abundant, but not in blossom. The lower end of the wild flower slope was graced with a beautiful cascading waterfall. We'll try to get this on next year's schedule!

The Gardens of the Triad trip April 13-15 was blessed with beautiful weather, good organization and not so blessed traffic! We proceeded to Raleigh and the Arboretum of N C State University. It's mission is the selection of superior landscape plants for use in the state. Formal plant beds display different species (native and exotic) of trees and shrubs. As a wild flower enthusiast and lazy gardener (plant it and forget it!) this was not as interesting to me as the other stops. The hard working gardeners in the group busily copied species and variety names so they could try them in their gardens.

The next day we proceeded to the Sarah P. Duke Gardens at Duke University in Durham where Larry T. Daniel, Associate Director of the Gardens and an assistant were our guides. The 55 acres are divided into three parts each in a beautiful setting - the Bloomquist Garden of Native Plants (my favorite), the Asiatic Arboretum which is devoted to trees and shrubs of the Far East and shows how these are related to the native flora of the eastern U.S. and the absolutely dazzling formal Terraces designed by American landscape architect, Ellen Shipman. The Terraces were ablaze with tulips, pansies, flowering cherry and crab-apple trees. From a wisteria-covered pergola at the summit of the Terraces one can descend past a series of fountains to an irregularly shaped fishpond at the base. This was the setting for lunches complete with a white-gowned bride being photographed for her wedding album.

The native plant garden of 850 species and varieties is displayed in a dramatic woodland setting. The species planted are native to the South from southeastern Virginia to eastern Texas. At the bog we saw some of the 18 species of sphagnum moss and several species of Sarracenia that are native to the Carolinas. We saw many familiar flowers plus an unusual and beautiful double-flowering bloodroot and Trillium decumbens, a trailing trillium similar to our familiar maroon Trillium cuneatum.

After lunch we drove to the Totten Center of the N C Botanical Gardens at Chapel Hill where Charlotte Jones-Roe (wife of Chuck Roe, former Natural Heritage Director) talked to us about the Garden and future plans. An interesting 1½ hours was spent wandering through the native wild flower garden and the extensive herb garden. At 3:00 pm Charlotte escorted the caravan to the 367 acre Mason Farm Biological Reserve. This is an area along a stream which is to be kept in its natural state and is available by special permit to researchers, classes, groups and the general public.

On Thursday morning Sandra Ladendorf's private garden in Chapel Hill was visited. Trails through the woods had plantings of both wild and cultivated flowers. The many varieties of primroses used were especially beautiful and interesting.

A good time was had by all!

COMMITTEES FOR 1993 DOROTHY RATHMANN

Distribution of Publications
Ruth Hoerich

Honors
Dean Crawford, Chr.
Grace Rice
Bill Verduin

Recorder
Erika Parmi, Chr
Jane Blackstone
Louise Foresman
Elton Hansens
Grace Rice
Bess Sinish
Anne Ulinski
Bill Verduin

Typist for Schedule
Harriet Kuster

Membership List
Ruth Hoerich
Elaine Montgomery
John Saby

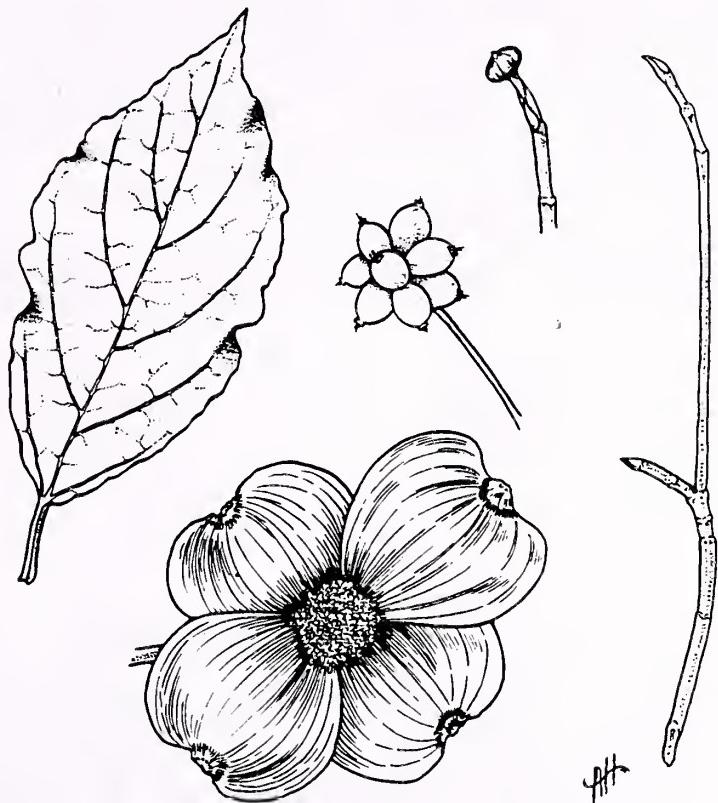
Program/Schedule
Dorothy Rathmann, Chr.
Jane Blackstone
Sam Childs
Dean Crawford
Elton & Aline Hansens
Don Herrman
Elaine Montgomery
Lowell Orbison
Erika Parmi
Bess Sinish
Dick & Jeanne Smith
Bill Verduin

And, of course, there's Louise Foresman as Historian (who also takes attendance at meetings and outings), and Elton and Aline Hansens as Editors of SHORTIA. Names of leaders and speakers and committees for the annual meeting and picnics appear in the Schedule. The Nominating Committee will be announced later in the year.

FOREST TREESALINE HANSENS

A member of the Family Cornaceae the flowering dogwood, Cornus florida, is one of America's finest native trees and is the State tree of N.C. and Virginia. Truly a four-seasons tree---in the spring it decorates hillsides, woods, and yards, with a spectacular display of showy white petal-like bracts, a most welcome and eagerly awaited sign of a fresh, new growing season; in the summer its leaves have a rich green luster; in the fall a grand finale occurs when sprays of red and yellow leaves and clusters of scarlet berries decorate the tree; in winter the berries that escape the squirrels and birds cling to the twigs, adding a touch of color in the drab cold months. This spring, I'm sure you'll agree, the dogwood gave us a superb show!

FLOWERING DOGWOOD



Unfortunately this lovely tree is now threatened by dogwood anthracnose, Discula sp., a newly identified fungus disease for which, as yet, there is no suitable control. Introduced in 1987, it is gradually killing dogwoods. Trees in wooded sites or on the edge of a woods are particularly susceptible. The fungus produces masses of spores presumably spread by birds or splashing rain. Initial symptoms are medium large purple-bordered leaf spots and scorched tan blotches that may enlarge and kill the leaf. Affected leaves often cling to the stems after leaf drop in the fall. The fungus infects twigs and grows down a limb and infects the main stem forming cankers which may eventually kill the tree. More information on this and other dogwood diseases can be obtained from the Agricultural Extension Service located in Jackson Park, Hendersonville, NC.

Cornus florida rarely grows above 3,000 ft. while its close relative, Cornus alternifolia, the alternate-leaved or blue dogwood is more often found at higher elevations in the NC mountains. Of the fifteen or more species of dogwood that occur in North America this is the only one with alternate leaves. It blooms in May or June after its leaves appear and is not showy. Its small white flowers are borne on slender pedicels in broad flattish clusters and the fruit is a blue-black berry.

Cornus florida is generally a small bushy tree 15 to 30 feet high with opposite leaves and very small, greenish, 4-petal flowers surrounded by four large white bracts. The wood of this tree is used for making textile shuttles, bobbins and engravers blocks. The bark, if chewed, is bitter and astringent and, be it fact or fiction, is said to furnish a substitute for quinine, while the powdered bark is supposed to make good toothpaste.

English lore claims the name dogwood comes from the fact that a decoction of the bark of Cornus sanguinea was used to wash mangy dogs.

DOGWOOD SNOW

*These oldest hills, that lay all winter long
Quiet beneath a patchwork quilt of snow
And balsam bough and blasted chestnut prong,
Laurel and rhododendron's darker glow,
Are waking now to all the urge of spring
And burning with a velvet violence
That smokes the thin blue air and makes it sting,
Flaming with life invisible but dense.*

*And yet, as if these summer seeking hills
Remembered lessons from their ice-locked sleep,
They sift a dogwood snow that clouds and spills,
And spreads in white pagodas soft and deep,
To lie between galax and fiddle fern:
Wisdom that seasons teach and mountains learn.*

*Francis Pledger Hulme
(native North Carolinian)*

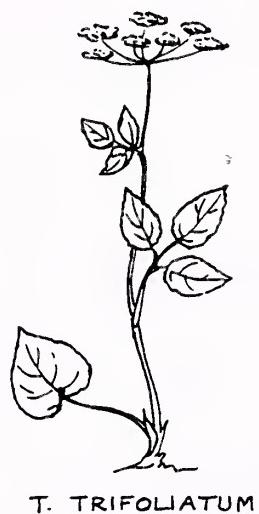
LOOK AGAIN !

Some of our most frustrating wildflower species are those bearing umbels of small yellow flowers and belonging to two genera in the Carrot Family (Apiaceae): Zizia, or Golden Alexanders, and Thaspium, known as Meadow Parsnips. Not only are there similar species within each genus, but some Zizias have a closer resemblance to certain Thaspiums than to others in their own genus, and vice versa.

Fortunately, all Zizias can be distinguished by the fact that the central floret in each umbellet is sessile, while in Thaspium all are stalked. This should suffice to separate Z. aptera and T. trifoliatum, both of which usually have long-stalked heart-shaped basal leaves and compound caulin leaves. (Typically, the latter has dark purple flowers, but the yellow-flowered var. flavum is even more common.

Three others normally have all of their leaves divided into three or more leaflets. T. barbinode is unique in having very small, stiff hairs at each of the upper nodes. These are lacking in Z. aurea (which has finely toothed foliage and umbels consisting of at least 10 primary rays) and Z. trifoliata (in which the leaflets are coarsely toothed and the rays are 10 or fewer).

A rarer species, T. pinnatifidum, cannot be mistaken for any of these, as its leaves are decomound with the ultimate divisions no more than 1/8" wide, and the flowers are cream-colored.



T. TRIFOLIATUM

Dick Smith

S H O R T I A

Vol. XV, No. 2.

Summer 1993

A quarterly publication of the WESTERN CAROLINA BOTANICAL CLUB

Editors: Elton and Aline Hansens

Distribution: Ruth Hoerich

Please submit contributions (articles, notes, letters to the editor, etc.) for the next issue by August 10, 1993 to:--Elton Hansens, 110 Old Kanuga Place, Hendersonville, NC 28739.

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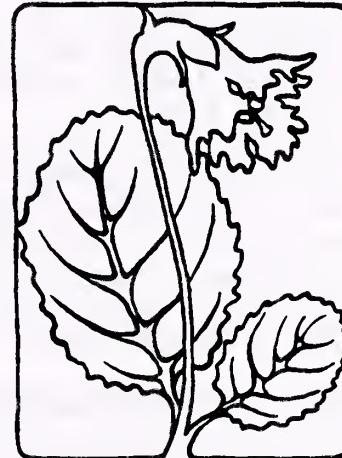
NEWSLETTER OF THE
WESTERN CAROLINA BOTANICAL CLUB

AUTUMN 1993

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ELTON and ALINE HANSENS
Editors

WESTERN CAROLINA BOTANICAL CLUB

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FROM THE PRESIDENT Dorothy Rathmann

Did you notice the new illustrations on the Schedule? Aline Hansens decided that the ones we'd been using were "worn out." So she provided something new. The sneezeweed is representative of all the summer and fall DYC's -- and was the design on placemats for the 20th Anniversary meeting last January. The Christmas fern represents all the evergreen plants which add so much to the beauty of the Western Carolina woods during the winter. Expect to see different illustrations on the Winter-Spring schedule. Thanks, Aline!

After being rained out on five of the first six field trips, we enjoyed (?) hot dry weather which cut done on wildflower displays. Several leaders are experimenting with the formats of the plant list handed out at the start of each trip. Please let us know which you find most useful.

FRANCIS BEIDLER FOREST Bill Verduin

Tired of tramping up and down these hills? Want something different -- entirely different? Come with us October 5 and 6 on a trip to the Francis Beidler Forest, know locally as the Four Holes Swamp.

This 5,000 acre tract near St. George, SC, "contains the largest remaining virgin stand of bald cypress and tupelo gum trees in the world." Many of these giants are believed to be more than 600 years old and tower over a hundred feet high.

The mile and a half boardwalk takes us deep into the swamp. The guidebook says that here we can "enjoy the quiet, solitude, and tranquility" of an area "uncluttered, spacious, and serene to the point of austerity." Well, maybe. But this will be my fifth trip into the swamp and I see more and enjoy the experience more fully every time I go. This is truly a unique place.

On the way down we will visit Edisto Gardens on the banks of the Edisto River in Orangeburg, SC. Two attractions here: one, a boardwalk through a younger stand of cypress and, the other, a large rose garden.

Tuesday night we will stay at a motel near St. George so we can be at the Swamp when they open at 9:00 AM. The swamp is owned jointly by the Audubon Society and the Nature Conservancy. There is a small admission charge (\$3).

Please make reservations with me before September 25 so we can reserve a block of motel rooms. Arrange carpooling with your friends. Come and enjoy a totally different experience!

GETTING TO KNOW YOU.....ALINE HANSENS

Bellesheim, Erma: Rt 1, Box 665, Sylva, NC 28779
(704) 456-8733; winter (Oct 24-May 15) 2342
Indigo Dr., Clearwater, FL 34623. Originally from Canada, Erma lived in a small scottish town near Ottawa where she grew up with a love of the woods and wildflowers. After many years in NY state she moved south and continues to enjoy nature in NC.



Eckstein, Chris: 106 Meadow Lane, H'ville, NC 28792 (704) 696-2458. After enjoying vacations here, Chris moved to this area about a year ago from Palm Beach, FL. Pursuing an avid interest in botany he happened on a book in the library donated by WCBC and consequently decided to join us.

Farrar, Edmund and Carver: 13 Dogwood Lane, Brevard, NC 28712 (704) 885-2456. Enjoyed vacations in this area since 1976 and recently moved here from Charleston, SC. In the process of restoring the Charleston property after Hurricane Hugo, they became interested in native plants. They learned of the WCBC through member Ruth Blanchard.

Kesler, Sally: 27 Carl Slagle Rd., Franklin, NC 28734. An artist with an avid interest in plants and nature, Sally enjoys and attends WCBC trips when possible.

Byrd, Carl and Margaret: 520 Oak Hill Ct., H'ville 28739 (704) 693-6314. Native North Carolinians with enthusiastic interest in plants, nature and the great outdoors. Learned of the WCBC thru member friends, Elton & Aline Hansens.

Eadie, Jackie: 950 Sunlight Ridge Drive, H'ville, NC 28792 (704) 696-1818. Moved from St. Louis area Jan. 1993. Jackie is a native of Kansas City, MO. She is a hiker and nature lover.

Address Changes:
Barrows, Merton and Alice, 600 Carolina Village Rd., No. 352.

Johnstone, Margaret, 600 Carolina Village Rd., No. 153, 28792 Tel. 697-4212.

Lewis, Barbara: Village Green #238. 310 West Meadowview Rd., Greensboro, NC 27406 Tel. (919) 272-0988.

TELEPHONE CHANGE:
Kilgore, Rosalie To: 693-8081.

Please make these changes on your Membership List.

THE SEARCH.....BILL VERDUIN and ELTON HANSENS

The flower wasn't very pretty but there were thousands of plants on the hillside and they certainly called attention to themselves. Even as we drove by slowly, we could tell with some certainty that they were related to the common bladder campion, Silene cucubalus. Six somewhat similar species grow in this area, but no obvious choice came to mind. So we parked for a closer look. The petals were white, but not spread out and showy. They looked curled inward as though they might be old flowers or perhaps badly in need of water. Not very attractive, to say the least. Neither of us recalled ever having seen this campion before--so the search was on.

Newcomb first. He shows 4 species but not the one we are looking at. Good old Radford et al. to the rescue. But this time they let us down. The key seemed to be straightforward, but either was poorly worded or both of us were misinterpreting it--the key did not solve the problem; nor did the technical descriptions. Since there were so many plants we cut one stem and tucked it in a cooler.

Each to our own library. Nothing in Peterson's Guide; Britton and Brown yielded clues enough to be encouraging. Then to Gray's Manual, 7th Edition, where the key settled the matter without a doubt. Our plant was Silene dichotoma, forking catchfly! And Rickett had a color photograph that could have been taken of the very plant we had before us. The mystery was solved.

Question: Was this a night blooming species? Only Wofford's recent book indicated clearly that this was a day-blooming plant. We placed the plant in water and soon the sorry-looking, rolled-up petals flattened out and we had a bouquet of pretty white flowers. Thus we must conclude that only the drought was to blame; water quickly restored the natural beauty of the catchfly. If you see a strange flower, accept the challenge--look it up!

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FOREST TREES

ALINE HANSENS

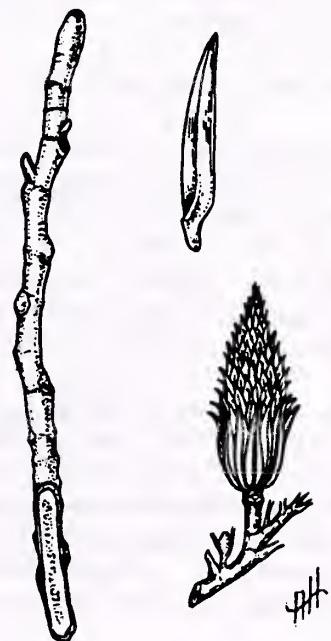
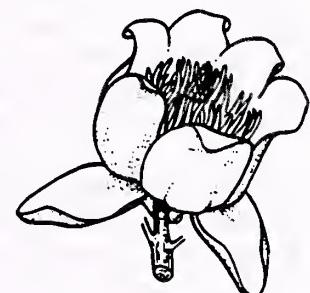
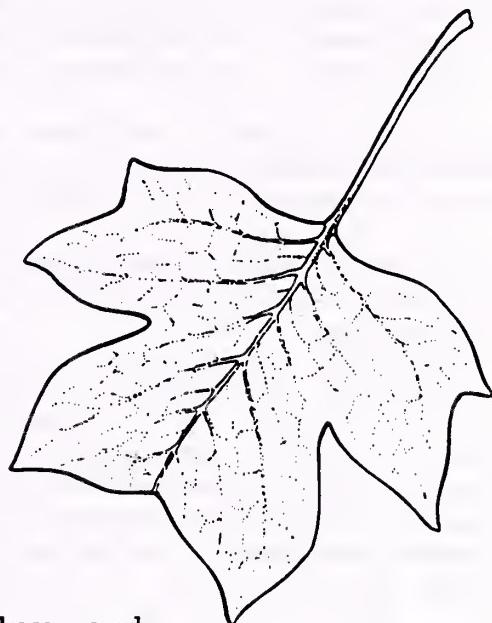
Liriodendron tulipifera is a name that rolls easily off the tongue. Liriodendron is from two Greek words describing a tree with lily-like flowers; tulipifera refers to its tulip-like blossoms. This tall, stately tree has many common names. Though not in the poplar family, perhaps you know it as yellow poplar, white poplar or tulip poplar, names which relate to its light, easily worked soft wood highly prized by industry for veneer and lumber. The Onondago Indians of central New York state called it Ko-yen-ta-ka-ah-tas or white wood, useful to them for making dugout canoes. It is also known as the saddle-leaf tree, a name derived from its distinctive truncate leaves.

Its crowning glory, the greenish-yellow and orange flowers that adorn it during the month of May, brings to mind the name tulip tree. Equally beautiful in the fall, this tree decorates the hillsides with its clear yellow foliage. The $2\frac{1}{2}$ to 3 inch cone-like fruit matures at this time, releasing its cargo of winged seeds and continuing to cling upright to the twigs after the leaves fall, looking much like a small candle. In winter one notes alternate reddish-brown buds, the terminal bud distinctively flat and blunt-tipped.

The tulip tree is a member of the small family Magnoliaceae. Three genera occur in the United States, but only two are arborescent, Magnolia and Liriodendron, the latter being the most common.

In this country the tulip tree ranges from southern New England to Wisconsin, southward to Louisiana and across to northern Florida. This tall, fast growing tree reaches its prime in the rich soil of the Ohio valley and the sheltered coves of the southern Appalachians. On the Wasilik Poplar Trail in North Carolina stands, what is said to be, the second largest tulip tree in the United States. This giant has a girth of 25 ft. and is 135 ft. high. It is located near Standing Indian Campground west of Franklin, N.C. and can be reached by taking US 64 west to Rock Gap; park here and follow the trail signs. It's well worth a visit.

TULIPTREE



WHAT YOU CAN DO ABOUT ROADSIDE PLANTINGS.....Barbara Hallowell

Have you traveled Western North Carolina highways and enjoyed extensive beds of bright oriental and California poppies, cannas, and toadflax? The NC Department of Transportation deserves credit for this highly successful beautification program.

Have you traveled Western North Carolina byways and enjoyed extensive beds of ragworts and black-eyed Susans, goldenrod and asters, chickory and native grasses? Nature does a fine job, too!

But--do you feel uncomfortable about all this? Why is NC DOT using exotic species when a wide diversity of native species puts on a fine display, too?

According to Ken Moore, Assistant Director of the NC Botanical Garden in Chapel Hill, one difficulty for NC DOT is "that truly native NC species are perennials generally requiring two, sometimes three to five years to reach blooming size. Taxpayers seem unable to wait, demanding instant color. So we have colorful beds of flowers from other parts of the world." Another difficulty, now easing, has been the availability of seeds of native plants.

Mr. Moore notes that exotics may be appropriate in city areas, but along rural NC roadsides they seem out of place. NC DOT is finally recognizing this & has started a recent grasslands/brushlands program of less managed roadsides. But Moore wishes DOT would take greater care locating signs for these, "Roadside Wildlife Habitat." "By not placing signs in the more attractive natural areas, the public may be discouraged from supporting this very sensible program & inadvertently encouraged to call for closer mowing of wild plants in favor of a neater horticultural appearance."

Xeroxed copies of NC DOT's brochure, "Roadside Wildlife Habitat in North Carolina," describing the program, can be had FREE by sending your request with a self-addressed, stamped envelope to Wildlife Habitat, c/o N. C. Botanical Garden, U. of N. C., CB #3375, Totten Center, Chapel Hill, NC 27599-3375.

Important! NC DOT needs your opinion, your support for this commendable program. They are receiving "impressive numbers of calls and letters from NC citizens and travelers who think beds of exotic annuals are a fantastic accomplishment. The voices of native plant enthusiasts who prefer to see a more regionally natural appearance accomplished through a creative, reduced mowing program are not being expressed in sufficient numbers.

To voice your opinion, write: Sam Hunt, Secretary of Transportation, NC DOT, P.O. Box 25201, Raleigh, NC 27611. Encourage less mowing, more grassland/brushland communities, & more native flora--a more environmentally and regionally appropriate roadside management program. Let yourself be heard! NC DOT will listen! --Exerpted from "In Praise of Native Plants," by Ken Moore, in the North Carolina Botanical Garden Newsletter, J-A '93.

As I sit on my deck I am aware of the sights and sounds around me. The scraping of a few katydids and the call of a distant pileated woodpecker blend with the chatter of titmice, chickadees and goldfinches to form the background chorus to the nearby whir of hummingbird wings. As I watch the hummingbirds fight for sole possession of the nectar feeder, I also notice many items of botanical interest---especially the many fruits on my Fraser magnolias. A few have already turned to the brilliant scarlet of late summer. The dogwood berries are still too green to interest the squirrels. The last blossoms on the sourwood and sweet pepperbush are visible. Below them heal-all, Joe-Pye-weed, black-eyed Susan and Jerusalem artichoke are bright splashes of color in a sea of green. A tiger swallowtail butterfly alights on daisy fleabane as I watch. All this is a reminder to me of how much we can find in our own backyards, if we take the time to look and see. Of course, this doesn't mean that I am advocating sitting in our backyards and abolishing field trips! However, more adventure exists on the other side of the fence!

Although the summer season (June/July) brought us heat and drought as opposed to the cold, rainy spring, we all managed to keep cool on our field trips. Most of them were held on or just off the Parkway. The first week in August we returned to a more normal weather pattern which resulted in the first cancellation for the summer season--Frying Pan Gap on August 6 because of rain.

June brought us Barbara Hallowell's always illuminating fern workshop and the annual picnic at Holmes State Forest which was attended by 28 members and guests.

The Buck Spring Nature Trail presented us with an abundance of lilies-of-the-valley (Convallaria majalica montana) on the May 28 trip and on the July 16 trip to the same area leather flower (Clematis viorna) was impressive. Some species which had been seen in bud or in bloom on the earlier trip were now in fruit e.g. highbush blueberry, (Vaccinium corymbosum), carrion flower (Smilax herbacea) and black chokeberry (Sorbus melanocarpa).

The Roan Mt. trip on July 9 attracted 9 people, 5 of whom left early. The 4 remaining reached their car before a thunderstorm on the mountain and cut the Gardens part from the day's schedule. The effects of the drought were seen in the scarcity, small size, and somewhat shrivelled appearance of Gray's lilies. The valiant 4 enjoyed milkshakes at Bonnie and Clyde's Cafe in Loafer's Glory! Thus fortified they made a wrong turn (on purpose) and were rewarded with a very scenic, but longer, trip home.

On the Haywood Gap trip July 23, we were happy to see bunchflower (Melanthium virginicum) and feather fleece (Stenanthium gramineum). We missed them last year. The fly poison (Amianthium muscaetoxicum) slope was a beautiful sight, but most of the blossoms had turned green. Perhaps we should try this trip earlier in July to see fly poison at its peak. Bee Tree Gap meadow on July 30 put on its usual colorful show. As the summer season comes to a close let's all come out to experience the beauty of the fall season.

INTERESTING EVENTS AND PLACES.....THE EDITORS

31st ANNUAL ROAN MOUNTAIN NATURALISTS' RALLY

Sept. 10-12, 1993 featuring Marty Silver on "Raptors" and Mack S. Pritchard presents "America the Beautiful-The Wild Idea" in the evening programs. Fourteen field trips on a wide variety of subjects are available Saturday. For additional information call Gary Barrigar (615) 543-7576.

26th ANNUAL NATURE WONDER WILD FOODS WEEKEND

North Bend State Park, Cairo WV, Sept. 17-19, 1993. Speakers, entertainment, wild food foraging parties and contests. Formal program Friday evening "The Taming of Wild Companions". For additional information call Maxine Scarbro (304) 558-3370 or Edelene Wood (304) 428-9590.

The Editors have folders on these 2 events. In future issues of Shortia we plan to list programs and field trips of botanical interest in NC and surrounding states. Please let us know if you like this idea.

BOTANICALLY SPEAKING

*No tiny seed nor noxious weed
Escapes our close attention
From Allium to Zizia
Or dandelion to gentian.
We poke and pry and scrutinize
And peer in mossy crannies
And when a slopes too slippery
We slide down on our fannies
We photograph and carry books
For solemn consultation
On species new as we pursue
Our botany education.*

Helen Tullar
(former WCBC member)
from SHORTIA Vol. 2., No. 1.

BOOK REPORT.....BESS SINISH

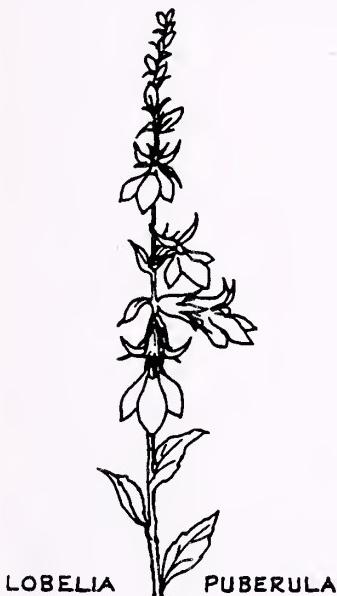
THE PRACTICAL BOTANIST by RICK IMES A Fireside Book, Simon & Schuster Inc. Publisher, 1990 \$24.95.

Have you been looking for a book which explains in simple easy terms the fascinating world of botany? The Practical Botanist by Rick Imes in about 150 pages does just that with explanations of the divisions of the Plant Kingdom, the nature of plants, their life cycles and various habitats. In simplified terms one learns about photosynthesis and other chemical reactions in plants. Discussions of liverworts, mosses, club mosses and ferns are included as well as practical suggestions for preserving flowers, cultivating a wild flower garden, sketching and photography. The 235 full-color illustrations add to the enjoyment of the book.

While this book may not appeal to experienced botanists, it would be helpful to many of our members. I highly recommend this book. It can be found in the Henderson County Library.

LOOK AGAIN !

Lobelia is an extensive genus that is well represented in the tropics, where some species attain enormous stature. Ours are of modest size, however, and the two largest species (and perhaps the most familiar) have individual flowers less than $1\frac{1}{2}$ " long. They are Great Blue Lobelia (L. siphilitica), with prominently striped dark blue corollas, and the brilliant scarlet Cardinal Flower (L. cardinalis).



Of the others, one of the loveliest is Downy Lobelia (L. puberula), a widespread species characterized by numerous light blue flowers $1/2$ " to $3/4$ " long arranged in a distinctively one-sided (secund) raceme. According to the literature, it typically is invested with minute erect, soft hairs (as the names would indicate), and has a calyx with lanceolate lobes.

Some plants found in our area fail to conform in all respects, but display some of the features that usually are ascribed to L. amoena. In this the stem is more likely to be glabrous, and the sepals are narrower--even linear--and sometimes bear callous-tipped teeth. In addition, plants are often seen with flowers of a deeper shade of blue than that which we customarily associate with L. puberula.

Since L. amoena has a much more restricted distribution, it is always gratifying to find a specimen that keys out with relative certainty. Unfortunately, though, the two species tend to intergrade, and then the distinctions between them become less clear. But even when our attempts at positive identification are frustrated, we can take satisfaction from the fact that the exercise itself has added just a little more to our intimate knowledge of the wildflowers around us.

Dick Smith

S H O R T I A

Vol. XV, No. 3

Autumn 1993

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Editors: Elton and Aline Hansens Distribution: Ruth Hoerich

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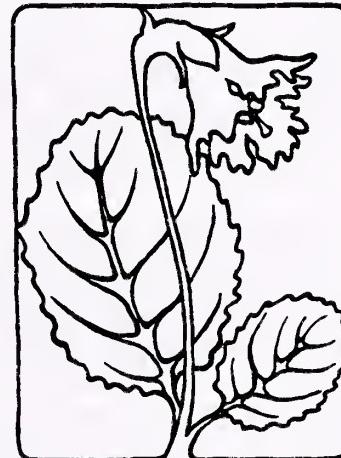
NEWSLETTER OF THE
WESTERN CAROLINA BOTANICAL CLUB

WINTER 1993 - 94

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ELTON and ALINE HANSENS
Editors

It's not easy to "think Spring" while we're experiencing the first frosts of Autumn. But that's what the Program/Schedule Committee has been doing. Look for your copy of the new Schedule in January.

One of the important actions at the annual meeting in January will be the election of Officers. The slate will be presented by the Nominating Committee of Bill Verduin, chair, and Sam Childs.

As a Club, we'll start celebrating the holidays at our Cookiefest on December 3 where we'll have a surprise slide show, a bit of caroling and, of course, lots of goodies. I hope to see you then.

May the year to come bring you health and happiness!

MARK YOUR CALENDAR ---- CHANGES IN JANUARY PROGRAM SCHEDULE

In response to Dr. Bir's request his talk on ericaceous plants has been rescheduled. So we'll start January as follows:

January 7: R. Bir - IDENTIFICATION OF ERICACEOUS PLANTS OF WESTERN NC -- Meet at Mt. Horticultural Crops Research Center at 2:00 PM.

January 14: L. Orbison -- FLOWERS OF TREES -- Meet at Mt. Horticultural Crops Research Center at 2:00 PM.

FRANK BELL Sr. 1898-1993, A TRIBUTE.....by LARRY KENYON

At this time when positive role models are so rare yet so necessary, Frank Bell met that need. Known as Chief to hundreds of young people in his camps, Mondamin and Green Cove; known as a civic leader and educator; known as a friend and supporter of nature, Frank Bell made a great contribution in his long life.

Every Botanical Club member who hiked on the Bell property, everyone who enjoyed the hospitality of a Bell barbecue or a glass of hot cider and cookies in his home benefited by the opportunity to know and work with Frank. He had a positive philosophy of life, with an emphasis on cooperation rather than competition. Who can forget his homely illustrations of great truths? He must have been a great one at a campfire, inspiring the young campers and counselors to higher thoughts and actions.

We are all better persons because we knew Frank. We honor his memory, and thank his wife Calla for all they have done for us and hundreds of others whose lives they touched. His work and philosophy will continue through his family, his friends, his campers. We will miss you, Frank.

In 1989 Frank was honored with Life Membership in the Western Carolina Botanical Club.

FOREST TREES.....ALINE HANSENS

The Black locust, Robinia pseudo-acacia, is a familiar tree with an interesting history. Originating in the southern Appalachians of America, it was first noted by early English settlers who found this readily available tree to be exceptionally strong and durable for building their simple cabins. In fact, news of its superior qualities spread and in 1601 Jean Robin and his son Vespasien, herbalists to King Henry IV of France, introduced this tree to Europe and raised a healthy stand in the Royal Botanical Gardens. Soon the black locust became extremely popular with the general public as an introduction from the New World. To recognize and honor the work of these two men, Linneaus named the genus of this tree Robinia.

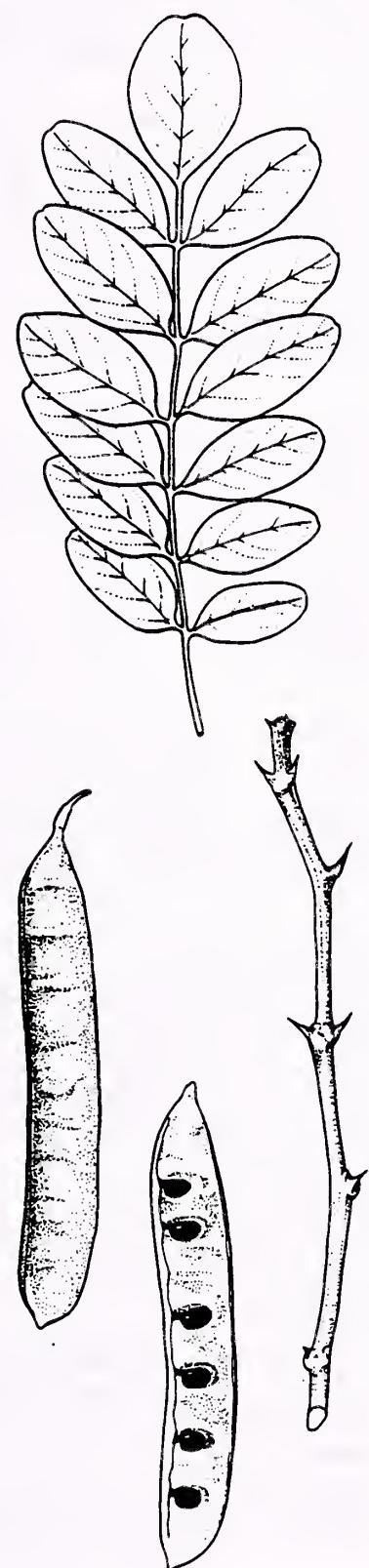
The black locust, sometimes called yellow locust, is a member of the family Fabaceae (legume family). This impressive tree grows to 80' tall with a trunk 3' to 4' thick and deeply furrowed bark. In May it is decorated with tassels of white, fragrant, pea-like flowers. Its pinnately compound leaves and open branches spread fern-like foliage high above other trees. The paired $\frac{1}{2}$ " thorns at the base of the leaf stalk are deciduous in the fall; the leaves turn a pale, clear yellow. The fruit, a smooth thin bean-like pod with 4 to 8 dark orange seeds, ripens in the fall but remains on the tree through the winter.

The so-called "sleep of the leaves", a phenomenon of true acacias, also affects the locust. At night the leaflets droop and seem to fold up, a mechanism explained as loss of sap pressure in the leaflet stalks.

Subject to damage by the locust borer, the wood of this tree has limited value. However, the extensive fibrous root system and ability to add nitrogen to the soil make the locust tree invaluable for soil reclamation and erosion control.

The largest known black locust in the Smokies National Park is an impressive giant located on the Big Locust Nature Trail off the Chimneys Campground area.

BLACK LOCUST



GRASSES, GRASSES, GRASSES.....BESS SINISH

WHAT ABOUT GRASSES? Poets have written odes to them. Composers have written music describing them. Authors have written of them to create atmosphere. Artists have painted them. Yet children ask, "What is a grass"? Grasses have subtle beauty, tiny flowers, and remarkable diversity. Their greatest virtue is their usefulness for both man and beast.

Most warm season grasses reach their showiest stages in the spring or in the fall. Fields of grasses glow and sparkle in the sunshine and may be at their most spectacular when wet with morning dew. Look for the tiny flowers tinged with rose or purple and with the yellow stamens hanging below.

The grass family (modern name Poaceae) encompasses the largest number of species world-wide in a single plant family, some 10,000, nearly 1000 of these species in the United States.

Ecologically from early in the world's history grasses have been important as soil binders, sending their roots far and wide to form turf which holds in check destructive forces of wind and rain and gives secure anchorage not only to herbaceous plants but also to trees and shrubs. Undoubtedly, of all flowering plants, grasses are the most important to man--rice, corn, wheat, oats, rye, barley, and sugar cane. In turn these are important in the production of meat and milk products. Except for grasses vast herds of grazing animals would cease to exist.

Grasses too are the source of spices, paper, perfume, oils, and timber (bamboo). Varied form and texture adapt them for many uses. Common grasses of the northeast have been made into ropes, paper, baskets, and many plaited articles. A few grasses have been used medicinally. In warmer climates the great bamboos are used to shelter, clothe and feed the people.

In prehistoric times animals and plants probably evolved simultaneously. Numerous fossils of grass-like leaves have been found. Since earliest times when tribes chipped rude implements for cultivating the soil or making war, grasses increased in importance to mankind. Grasses are the most widely distributed flowering plants; innumerable are the ways in which they serve mankind.

Future articles in Shortia will deal with details of structure of grasses and with recognition of species.

Sources:

The Book of Grasses, Mary Evans Francis, Doubleday, Page & Co. 1920.

How to Know the Grasses, Richard W. Pohl, Wm. C. Brown Co. Revised

Grasses--An Identification Guide, Peterson Series, by Lauren Brown, Houghton Mifflin Co., 1979.



It was a pleasant winter morning in 1993 when Ken Hulick, Superintendent of Carl Sandburg National Historic Site and Warren Weber, Resource Management Chief, invited Anne Ulinski and me to become "Volunteers in the Parks" to do a biological survey of the Sandburg Site. Observations of three areas - the trail to Big Glassy, the rock outcrops, and the Lake trail - officially began in February 1993.

On almost any day throughout the year, joggers, hikers, and strollers may be seen along the trail to Big Glassy. One day each week two nature-oriented volunteers could be seen observing and recording their observations. This will continue at least through the winter months to complete the cycle of a year.

To date, 250 herbaceous plants, trees, and shrubs have been identified. Birds, several animals, fence lizards, skinks, a toad, and 3 kinds of snakes have been documented.

Each day has been marked by at least one new discovery. Among the familiar plants along the Lake trail are Solomon's plume (Smilacina racemosa) and Pinxter flower (Rhododendron periclymenoides). Along the shore was a plant new to us - the hedge hyssop (Gratiola viscidula).

It was in October when the dramatic yellows of the chestnut oaks, the rich golden yellows of the hickories, the brilliant reds of the black gums and sourwoods confirmed that the woodlands through which the trail to Big Glassy climbed was an oak-hickory habitat. The other trees, shrubs, and herbaceous layer are typical of the vegetation associated with such a habitat.

Cranefly orchid (Tipularia discolor) and rattlesnake plantain orchid (Goodyera pubescens) leaves are quite abundant in these woods. At the appropriate time the leaves withered and the flowering stalks appeared. New leaves will be seen all winter. There were only a few flowering stalks of the white milkweed (Asclepias variegata) and starry campion (Silene stellata). One of the latest blooming of the flowering plants was dittany (Cunila origanoides), in nice patches along the upper section of the trail.

In an island-like pocket of soil in the Big Glassy rock outcrop grows a grouping of fringe trees (Chionanthus virginicus). On the way up to Big Glassy, the woods surround and extend far out from and almost obscure several other rock outcrops. Primarily dry due to lack of soil as well as exposure to wind yet with crevices and seepage zones which retain moisture, these rugged sloping rock surfaces create habitats for unusual plants in distinct microsites.

In crevices, fringe trees, several species of pines, and red cedar create islands of tall vegetation. Accumulations of mineral or organic soil in pockets or depressions in the large expanse of rocks harbor such rare plants as Greenland sandwort (Minuartia groenlandica v. glabra), outcrop St. John's-wort (Hypericum denticulatum v. acutifolium) and pink fumewort (Corvdalis sempervirens). Other special plants are a mint (Pycnanthemum flexuosum), a disjunct; divided-leaf groundsel (Senecio memmingeri); a rushfoil (Crotonopsis elliptica); a meadow-beauty (Rhexia mariana v. mariana); and fameflower (Talinum teretifolium).

The most amazing plant was Michaux's saxifrage (Saxifraga michauxii). It began blooming in late May and put forth its last flowers at the end of October. This plant which is at home on moist slopes or seepage slopes such as those on the Blue Ridge Parkway, somehow survived the summer and fall droughts.

The joy of discovery is renewed as we return again and again along the trails at the Sandburg National Historic Site to observe nature's progress as life is renewed, grows, ripens its seeds, then rests during the winter months.

After a rainy spring and a hot and dry summer we were rewarded with a glorious autumn. Those of us who have lived in the area for 15 to 20 years agreed that it was one of the best, if not the best, for brilliant and long lasting color. I am once again sitting looking out at the mountains. Is this last day of October an omen of things to come? It is a blustery, cold and partially clear day in the 30s with the clouds covering the mountain tops, but parting occasionally to give me a glimpse of SNOW.

The effects of the summer drought were particularly noticeable at Sugarloaf where we found the summit meadow to be covered with almost completely dried herbaceous plants and only a few blooms. In spite of this we found 75 species, most at the three stops along the road. The Lake Issaqueena trip was notable for a dozen or so species that are rarely seen in the mountains. It was a beautiful day for the Blue Ridge Parkway trip which, despite many confusing composites, culminated in a spectacular display of grass of parnassus at Wolf Mountain Overlook's rock face. A cold gray day on Oct. 1 at Holmes State Forest did not deter about 30 members from enjoying a covered dish picnic. Several stalwart members earned their lunch by hiking the long trail. Don and Kay Herrman entertained us at their home, Ramblewood, on Oct. 8. Members who arrived early watched the fog dissipate from the valley and hills opening up a glorious view of the mountains. The comical and imaginative signs and figures along the trails enlivened the flower walk. The Carter's Creek, Whiteside Mountain and Jones Gap trips measured up to their usual beauty. On Oct. 29 Dean Crawford was leader on Long Branch Road. Except for the late flowering Ladies Tresses very few flowers were still in blossom, but the colorful foliage and a hillside adorned with Christmas fern and witch hazel delighted everyone.

The only cancellations during this period were the Frying Pan Gap trip on Aug. 6 and the Beidler Forest two day trip. The overnight was cancelled because the swamp was almost dry and very few of the characteristic plants were available to be seen.

There are some fascinating programs on the winter schedule, so let's all try to be in Hendersonville on Friday afternoons.

GETTING TO KNOW YOU.....ALINE HANSENS

Heimbinder, Verna and Larry: 81 Squirrel Trail, H'ville, NC 28739. (704) 891-2614. Located in Sweetwater Hills. Recently moved to NC from Long Island. An avid interest in plants led to membership in WCBC. Verna's hobby is machine knitting.



One Sunday afternoon I visited Harry Logan and he showed me one of his most prized possessions--the 10 volume Encyclopedia of Horticulture by Thomas Everitt, Horticulturist at the N Y Botanical Garden. I was intrigued by the page which was inscribed "To My Good Friend of More than Fifty Years, Harry Logan, Plantsman Supreme" That simple tribute describes Harry Logan to perfection.

A gentle warm friendly person, Harry is always eager to share his knowledge and great love of plants. At 87 he still tends and cares for his large garden perhaps "not as well as he used to", he is quick to point out. Plants are his life and rarely does a visitor leave without a gift from his garden. Many, like us, share bits of his garden and readily tell friends that a shrub or clump of interesting flowers was from Harry.

Harry Logan arrived in this world on Jan. 21, 1906 at Bernardsville, NJ. During his early years the family moved a number of times including to Eastport, Long Island and Westchester County, NY. At 13 Harry was the oldest of seven children and had already decided to be a horticulturist. In his later teens, Harry left school to help with the family. His mother died when he was 18. After that he attended Mount Hermon School for nearly two years. Of far greater importance were the succession of jobs which followed. Harry gained very broad experience in ornamental horticulture and landscape design. He was employed by F. R. Pierson in Tarrytown, NY and later at their nursery in Scarborough, at Yonkers Nursery and at Roman Landscape Contracting Co. The years of the great depression were upon him and times were tough. In 1929 Harry decided to establish a business of his own in Bronxville. He could earn \$6.00 per day 5 days per week. As the economy improved his business grew and prospered. Harry knew how to do many things and his insatiable quest for technical and practical knowledge of plants gave him an edge on many plantsmen. In addition he participated in horticultural and botanical organizations, accumulated books for his library, and increased his appreciation of plants and the out-of-doors with many field trips and meetings. Along the way he also courted Florence May Cole and married her on April 23, 1942. This was indeed a most important event in his life.

Harry's first trip to Carolina in 1936 was a botanical expedition with the Torrey Botanical Club to Roan and Grandfather Mountains. In July 1967 Harry visited the Hendersonville area and the next year the Logans moved to Grimesdale and Harry purchased property for nursery stock. He shipped three large trailer loads of plants and transplanted them to his land.

Unfortunately, his wife had a stroke which left her paralyzed. Harry rose to the occasion, caring for her until her death in 1970. The following year he visited May's relatives in England and toured the country. Previously in '61 and '66 he had toured Britain and extended his explorations to the grandeur of the Swiss Alps and the antiquities of ancient Greece. On all of these trips he sought out famous gardens and botanized.

HARRY LOGAN cont'd

In Carolina Harry has expanded his activities in new directions. After taking a wildflower course in '72 he suggested a group be formed to study wild flowers in interesting places. This resulted in the Western Carolina Botanical Club and Harry led the first field trip. He taught courses at Blue Ridge Community College 3 terms a year for several years and also organized field courses for Opportunity House, visiting noteworthy gardens. Since '81 he has written the "Mountain Gardener" for the Men's Garden Club. Harry landscaped the new Opportunity House. The Men's Garden club awarded him the Second Wind Hall of Fame in '84. The WCBC named him an Honorary Member in '86.

Remember, Harry celebrates his 88th Birthday Jan. 21, '94 and the WCBC Annual Meeting is on that day. Let's help Harry celebrate!!!

BOOK REPORT.....LOWELL ORBISON

RED OAKS AND BLACK BIRCHES by REBECCA RUPP Published by Storey Communications, Inc. Pownal, VT 1990.

If it were not for Bill Verduin's interest in books on trees and Elton Hansens' request that I review "Red Oaks and Black Birches" I probably would not have read this interesting book even though it has an intriguing title.

The author, Rebecca Rupp, describes 19 genera of trees and their native and foreign species. She has presented the usual information about the characteristics of each species and the similarities and differences among them. But what makes the book much more than a guide to these selected genera is the wide ranging cultural vignettes and historic and economic facts related to each. There is a (bonus) chapter, too, entitled 'Christmas Trees' which not only describes the trees that have been used for Christmas celebration but also the ways that celebration has changed over the centuries. The use of Christmas trees has increased so much that 80 million trees are planted each year for the future Christmas trade.

Beyond all these interesting facts is the author's exceptional facility with language and her delightful wit. It is a book well worth reading both for its information and the pleasure it gives.

A unique feature of the book which should not be overlooked is the bibliography of 167 references; it is truly an invitation for further exploration. The range is from Hortus III, Scientific American, and Civilization to The Violin and the Fungus, Pines for Eating, The Hangover Handbook, A Book of Country Things, Country Arts in Old American Homes, Martha Washington's Book of Cookery, Mystery Behind the Magi's Gift and Every Day Life in Massachusetts Bay Colony. The bibliography is an extensive work of scholarship.

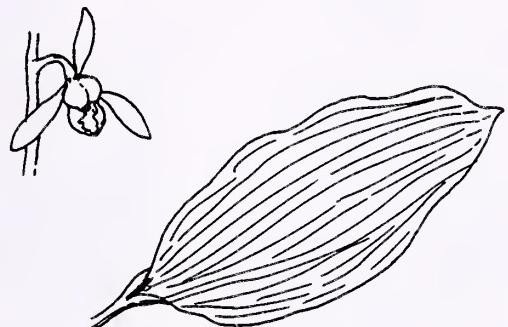
Editor's Note: This book is in the Library in Hendersonville and was a gift from our Western Carolina Botanical Club.

LOOK AGAIN !

Many wildflowers retain at least some of their leaves throughout the winter--a property that helps us to keep track of the plants until the time comes for them to bloom. There are a few, however, whose foliage is slightly less persistent and, in fact, has the unsettling habit of vanishing just when it would have become most useful as a locator.

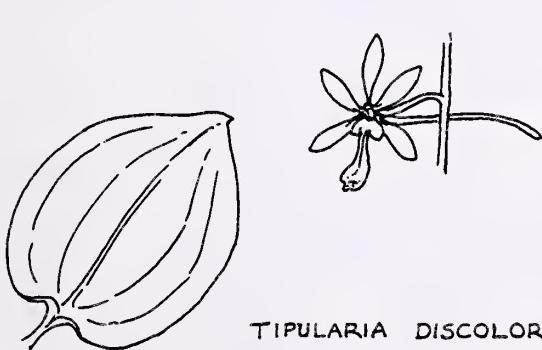
Two species that come to mind are native orchids: Aplectrum hyemale, known as Puttyroot or Adam-and-Eve, the only member of its genus; and Tipularia discolor, the Crane-fly Orchid, which has only two close relatives, both of them Asian.

Aplectrum produces a solitary leaf in late summer or fall, and it decays in early spring before the flower stem emerges in May or June. The leaf is 4 to 6 inches long, elliptic, with wavy margins and a great many impressed whitish longitudinal veins that give it a corrugated appearance. The inflorescence is a raceme of up to 15 flowers with sepals and petals about 1/2" long, the lip white marked with violet, otherwise varying to yellowish or greenish with magenta markings.



APLECTRUM HYEMALE

Tipularia discolor also emits a single leaf, but it is ovate with a depressed midvein and 2 to 6 prominent side veins, dull green above and glossy purple beneath. A slender scape appears in late summer bearing a raceme of many delicate, slightly nodding flowers; the floral parts are 3/8" long except for the much longer spur, and usually are pale purplish but vary considerably in color. By that time the leaf has disappeared.



TIPULARIA DISCOLOR

Dick Smith

S H O R T I A

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Please submit contributions (articles, Letters to the Editors, notes, etc.) for the next issue by February 1, 1994 to Elton J. Hansens, 110 Old Kanuga Place, Hendersonville, NC 28739.

MARK YOUR CALENDAR ---- CHANGES IN JANUARY PROGRAM SCHEDULE

In response to Dr. Bir's request his talk on ericaceous plants has been rescheduled. So we'll start January as follows:

January 7: R. Bir - IDENTIFICATION OF ERICACEOUS PLANTS OF WESTERN NC -- Meet at Mt. Horticultural Crops Research Center at 2:00 PM.

January 14: L. Orbison -- FLOWERS OF TREES -- Meet at Mt. Horticultural Crops Research Center at 2:00 PM.

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FIRST CLASS
